

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year) See Form PCT/ISA/210 (sheet 2)		
Applicant's or agent's file reference P 43884 WO		
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/EP2005/002960	International filing date (day/month/year) 19.03.2005	Priority date (day/month/year) 02.04.2004
International Patent Classification (IPC) or both national classification and IPC G01B21/04		
Applicant LUGTENBURG, Jan, Bernd		

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input checked="" type="checkbox"/>	Box No. II	Priority
<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. II Priority

1. ☐ The following document has not yet been furnished:

☐ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.

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Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 6 and 14

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☒ the claims, or said claims Nos. 6 and 14 are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See Supplemental Box for further details.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	8, 9, 16, 18 and 19	YES
	Claims	1 to 5, 7, 10 to 13, 15 and 17	NO
Inventive step (IS)	Claims		YES
	Claims	8, 9, 16, 18 and 19	NO
Industrial applicability (IA)	Claims	1 to 5, 7 to 13 and 15 to 19	YES
	Claims		NO

2. Citations and explanations:

see supplemental sheet.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see supplemental sheet.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Boxes V and VII

This Written Opinion of the International Searching Authority makes reference to the following documents:

D1: EP-A-0 177 038

D2: EP-A-0 661 518

D3: PATENT ABSTRACTS OF JAPAN, volume 1998, no. 11,
30 September 1998, pub. no. JP-A-10 147 417

D4: PATENT ABSTRACTS OF JAPAN, volume 006, no. 240
(M-174), 27 November 1982, pub. no. JP-A-57 137
135

1. No finding concerning the requirements of PCT
Article 33

- 1.1 According to the description, the subject matter of the present application comprises *inter alia* a centring device (8), which is described on page 14, lines 1 to 22, and illustrated in figure 2, and a reference device (13), which is described on page 13, lines 14 to 29, and is illustrated in figure 3. The centring device (8) centres and holds the object for measurement (3) with respect to the sensor system (2) and the reference device (13), while the reference device (13) determines independently thereof the object-related coordinate system on the basis of a reference structure (9) on the object (see page 16, line 22, to page 17, line 2). A reference device which mechanically aligns the object for measurement on the basis of the reference structure is not described. Consequently, the subject matter of claims 6 and 14 is neither supported by the description (PCT

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Article 6) nor disclosed in such a way that a person skilled in the art can carry out the subject matter of the application in a way corresponding to claims 6 and 14 (PCT Article 5).

2. Objections under PCT Article 33(2) (novelty)

2.1 Document D1 (see in particular page 3, line 35, to page 9, line 29, and figures 1 to 7) describes a method for measuring an object for measurement (2), comprising at least one reference structure for the definition of an object coordinate system that is fixed in relation to the object (see page 8, line 34, to page 9, line 29), with the aid of a measuring system (3), which comprises at least one sensor system (3) for recording a contour of the object for measurement (2) in a measurement coordinate system, with the following steps:
positioning the object for measurement (2) in a measuring position (1) in the recording area of the sensor system (3) (see page 4, lines 3 to 6);
fixing the position of the object coordinate system on the basis of the reference structure (see page 8, line 34, to page 9, line 29);
linking the object coordinate system with the measurement coordinate system (see page 2, line 25, to page 3, line 5);
turning the sensor system (3) about a rotation axis (3) in relation to the object for measurement (2) to determine the contour data (page 4, lines 3 to 24);
processing the contour data, taking into account the position of the object coordinate system, in an evaluation unit (page 3, lines 5 to 8).

For these reasons, the subject matter of independent patent claim 1 is anticipated by

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document D1, and is therefore not novel.

2.2 Document D1 (see in particular page 3, line 35, to page 9, line 29, and figures 1 to 7) describes a device for measuring an object for measurement (2), comprising at least one reference structure for the definition of an object coordinate system that is fixed in relation to the object (see page 8, line 34, to page 9, line 29), with:

a measuring system (3), which comprises at least one sensor system (3) for recording a contour of the object for measurement (2) in a measurement coordinate system, and

a reference device (3) for fixing the position of the object coordinate system on the basis of the reference structure (see page 2, line 25, to page 3, line 5),

the sensor system (3) being mounted in a rotationally movable manner with respect to the object for measurement (2) (see page 4, lines 3 to 24).

For these reasons, the subject matter of independent patent claim 11 is anticipated by document D1, and is therefore not novel.

2.3 The features of claims 2 to 5, 7, 12, 13, 15 and 17 are likewise known from document D1 and therefore do not contribute anything novel to the subject matter of the patent claims preceding them.

Claims 2 and 12: see page 4, lines 3 to 6;

Claims 3 to 5 and 13: see figure 1;

Claims 7 and 15: see figures 1, 4, 6 and 7;

Claims 17: see page 4, lines 6 to 8.

2.4 Document D2 (see in particular column 1, line 1, to column 3, line 27, and figures 1 to 5) describes a

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method for measuring an object for measurement (6), comprising at least one reference structure (P1, P2, P3) for the definition of an object coordinate system, with the aid of a measuring system (A), which comprises at least one sensor system (1) for recording a contour (10) of the object for measurement (6) in a measurement coordinate system, with the following steps:

positioning the object for measurement in a measuring position in the recording area of the sensor system (1) (see figure 2);

fixing the position of the object coordinate system on the basis of the reference structure (P1, P2, P3) (see column 3, lines 9 to 27);

linking the object coordinate system with the measurement coordinate system (see column 1, line 52, to column 2, line 11);

turning the sensor system (1) about a rotation axis (19) in relation to the object for measurement (6) to determine the contour data (see figures 2 and 3);

processing the contour data, taking into account the position of the object coordinate system, in an evaluation unit (see column 1, lines 36 to 45).

For these reasons, the subject matter of independent patent claim 1 is anticipated by document D2, and is therefore not novel.

- 2.5 Document D2 (see in particular column 1, line 1, to column 3, line 27, and figures 1 to 5) describes a device for measuring an object for measurement (6), comprising at least one reference structure (P1, P2, P3) for the definition of an object coordinate system that is fixed in relation to the object, with:

a measuring system (A), which comprises at least

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one sensor system (1) for recording a contour (10) of the object for measurement (6) in a measurement coordinate system, and
a reference device (1) for fixing the position of the object coordinate system on the basis of the reference structure (P1, P2, P3),
the sensor system (1) being mounted in a rotationally movable manner (axis 19) with respect to the object for measurement (6).

For these reasons, the subject matter of independent patent claim 11 is anticipated by document D2, and is therefore not novel.

2.6 The features of claims 2 to 5, 7, 10, 12, 13 and 15 are likewise known from document D1 and therefore do not contribute anything novel to the subject matter of the patent claims preceding them.

Claims 2 and 12: see holder 11, 12 in figures 2 and 3;

Claim 3: see figures 2 and 3;

Claims 4, 5 and 13: see figure 2;

Claims 7 and 15: see figures 3 and 4;

Claim 10: see column 11, lines 12 to 27, and figures 4 and 5.

3. Objections under PCT Article 33(3) (inventive step)

3.1 In the area of measuring systems, the provision of a marking device, for example for marking defective components, is known (see document D3). Consequently, the features of claims 8 and 16 concern known measures which a person skilled in the art would provide without thereby being inventive.

3.2 In the area of measuring systems, it is likewise

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known to move objects for measurement towards and away from the measuring device using a linear conveying device (see documents D3 and D4). Consequently, the features of claims 9 and 18 concern known measures which a person skilled in the art would provide without thereby being inventive.

- 3.3 On the basis of document D1, a person skilled in the art would first record the size of the object for measurement (2), without thereby being inventive, in order to be able to place it on the base (1) without colliding with the measuring device (3 to 13). Consequently, the features of claim 19 do not contribute anything inventive to the subject matter of the patent claims which precede it.

4. Discussion of industrial applicability (PCT Article 33(4))

- 4.1 The claimed subject matter can be industrially applied for measuring the contour of objects.

5. Further comments

- 5.1 Document D1 and D2 are neither cited in the introductory part of the description nor has the prior art contained therein been briefly outlined (PCT Rule 51(a)(ii)).